

WHAT IS CLAIMED IS:

1. An ink feed system for ink-jet printers,
comprising
 - 5 - a reservoir chamber,
 - a feed chamber, fluidly connected to printing
heads of said printer and to said reservoir chamber,
 said reservoir chamber, in a configuration for
normal feeding of the ink to said heads, being disposed
10 higher than said feed chamber,
 said system further providing a duct provided with
an opening to the atmosphere and with a first port for
fluid connection to the feed chamber,
 said feed system being wherein said duct is further
15 provided with a second port for fluid connection to the
reservoir chamber, said reservoir chamber being
otherwise impermeable to fluids.
2. An ink feed system according to claim 1,
suitable for assuming a first configuration for normal
20 feeding of the ink and a second configuration for
pouring topping-up ink into said reservoir chamber.
3. A feed system according to claim 2 wherein, in
said second configuration, said second port provides a
passage for the topping-up ink that is not parallel to a
25 horizontal reference plane.

4. A feed system (1) according to claim 2 or 3 wherein, in said second configuration, said opening to the atmosphere, of the duct, is disposed higher than said second port of the duct.

5 5. A feed system according to claim 2 wherein, in said second configuration, said second port is disposed between said opening and said first port of the duct.

6. A feed system according to claim 2 wherein, in said second configuration, the topping-up ink flows
10 through said duct and said second port.

7. A feed system according to claim 2, wherein said system is suitable for rotating from said first configuration to said second configuration.

8. A feed system according to claim 1, wherein
15 said reservoir chamber, said feed chamber and said duct are contained in a single substantially rigid case.

9. A feed system according to claim 8, wherein said case is a cylindrical case.

10. A feed system according to claim 1, comprising
20 a hinge suitable for permitting the rotation of said system.

11. A feed system according to claim 10, wherein said hinge is close to said outflow port.

12. A feed system according to claim 2 wherein, in
25 said second configuration, said feed chamber provides a

reserve chamber separate from a topping-up path by which topping-up ink flows into said reservoir chamber.

13. A feed system according to claim 12, wherein said topping-up path for the ink comprises said duct and
5 said second port.

14. An apparatus for feeding ink to ink-jet printers, comprising one or more feed systems according to any one of the preceding claims.

15. An apparatus according to claim 14, comprising
10 support means suitable for supporting said feed system at a predetermined level with respect to a reference plane.

16. An apparatus according to claim 15, wherein said support means comprise at least one stirrup
15 suitable for co-operating with said feed system for the support thereof, said stirrup being suitable for producing a modular structure for the support of a plurality of feed systems.

17. A method for pouring ink into a gravity ink
20 feed system for ink-jet printers,

said system comprising a reservoir chamber and a feed chamber,

said method comprising, in order,

- the step of separating said feed chamber from
25 a topping-up path through which topping-up ink is then

introduced into said reservoir chamber;

- the step of pouring said topping-up ink into said feed system.

18. A method according to claim 17, wherein the
5 step of separating said feed chamber from said topping-up path comprises the step of rotating said feed system from a first configuration, for normal feeding of the ink, to a second configuration for pouring the topping-up ink.

10 19. A method according to claim 17, wherein the step of separating said feed chamber from said topping-up path provides for the step of maintaining the free surface of the reserve ink contained in said feed chamber at a pressure substantially equal to atmospheric
15 pressure.

20. A method according to claim 17 or 18 or 19 which further provides for feeding ink to the printer simultaneously with said steps.

21. An ink feed apparatus for printers
20 comprising:

- at least one ink feed system provided with a reservoir chamber suitable for containing said ink and with an outflow port for the outflow of said ink to printing heads of said printer;

25 - support means suitable for supporting said

feed system at a predetermined level with respect to a reference plane,

wherein said support means comprise at least one stirrup suitable for co-operating with said feed system
5 for the support thereof,

said apparatus being wherein said stirrup is suitable for producing a modular structure for the support of a plurality of feed systems.

22. An apparatus according to claim 21, wherein
10 said stirrup has a non-symmetrical configuration with respect to at least one centre line plane.

23. An apparatus according to claim 21 or 22, wherein said stirrup has geometric couplings suitable for producing said modular structure.

15 24. An apparatus according to claim 21, wherein said stirrup has a pocket and a protruding member which are suitable for producing said modular structure.

25. An apparatus according to claim 21, wherein said stirrup has at least two opposed lateral surfaces
20 for producing said modular support structure.

26. An apparatus according to claim 21, further comprising at least one terminal closure member suitable for coupling to said stirrup and to a frame of said apparatus.

25 27. An apparatus according to claim 26, wherein

said terminal closure member is adjustable in height on said frame with respect to said reference plane.

28. An apparatus according to claim 21, wherein said support means comprise a separate intermediate member suitable for at least partially receiving said feed system and of co-operating with said stirrup of said support means.

29. An apparatus according to claim 21, wherein said support means are suitable for supporting said feed system in a configuration for normal operation and in a configuration for pouring the ink, said configuration for pouring the ink being rotated with respect to said configuration for normal operation.

30. An apparatus according to claim 29, wherein said apparatus comprises locking means for locking said feed system in said configuration for normal operation and in a said configuration for pouring the ink.